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| EXAMINER | |
|---|---|
| THROWER, LARRY W | |
| ART UNIT | PAPER NUMBER |
| 1791 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/534,845 | CHARTIER ET AL. | |
| | Examiner | Art Unit | |
| | LARRY THROWER | 1791 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *10 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12 and 14-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 November 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. The amendment filed November 10, 2008 has been entered. Claim 13 is cancelled. Claims 1-12 and 14-19 are under examination.

### *Drawings*

2. The drawings were received on November 10, 2008. These drawings are accepted.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-7, 9-11, and 14-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Goodman *et al*. (US 5,972,263), hereafter Goodman.

- Regarding **Claim 1**, Goodman teaches a process for producing clay compositions for use in slip casting. Goodman teaches a slip casting process wherein a slip (see column 1 line 22-29) is cast under pressure (see column 2 line 11-15) to form a deposit (see column 1 line 40-43). The slip mixture comprises a solution containing water, clay, and deflocculants (see column 1 line 22-29; see also column 1 line 40-43). The water is sucked out of the slip, i.e. filtered (see column 1 line 40-43). It is

the examiner's position that the water removed from the slip contains at least some residual amounts of deflocculant. Thus, the water filtered through the slip contains a deflocculant.

- Regarding **Claim 3**, Goodman teaches the slip mixture comprises kaolnitic clay (see column 1 line 22-29).
- Regarding **Claim 4**, Goodman teaches the slip mixture comprises a variety of clays (see column 1 line 22-29).
- Regarding **Claim 5**, Goodman teaches the slip mixture comprises quartz (see column 1 line 22-29).
- Regarding **Claims 6-7**, Goodman teaches using deflocculant of 0.12 wt % (see Table 1 at column 11-12; see also column 9 line 29-40).
- Regarding **Claims 9, 11 and 14-18**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29). "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).
- Regarding **Claim 10**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29).

5. Claims 2-7, 9-11, and 14-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Goodman *et al*. (US 5,972,263), hereafter Goodman, as evidenced by Applicant's Specification (see Page 3 line 22-24).

- Regarding **Claim 2**, Goodman teaches the slip mixture contains a clay mixture (see column 1 line 22-29), i.e. flocculant. Clay based slips are flocculated as evidenced by Applicant's Specification (see Page 3 line 22-24).
- Regarding **Claim 3**, Goodman teaches the slip mixture comprises kaolnitic clay (see column 1 line 22-29).
- Regarding **Claim 4**, Goodman teaches the slip mixture comprises a variety of clays (see column 1 line 22-29).
- Regarding **Claim 5**, Goodman teaches the slip mixture comprises quartz (see column 1 line 22-29).
- Regarding **Claims 6-7**, Goodman teaches using deflocculant of 0.12 wt % (see Table 1 at column 11-12; see also column 9 line 29-40).
- Regarding **Claims 9, 11 and 14-18**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29). "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim

is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

- Regarding **Claim 10**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29).

6. Claims 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Marple *et al*. (CA 2,124,863), hereafter Marple.

- Regarding **Claim 12**, Marple teaches a device for producing a ceramic item comprising a mold (see Fig. 1a 10; see also page 6 line 7-13), a first tank suitable for containing a slip (see Fig. 1a at 18; see also page 6 line 15), and a second tank containing a solution (see Fig. 1a at 20; see also page 6 line 15). In addition, Marple teaches a means for alternatively pressure injecting the slip from the first tank and solution from the second tank (see Fig. 1a;s see also page 6 line 17-24; see also page 11 line 17-19).
- In addition, Claim 12 invokes 35 U.S.C. 112, sixth paragraph with the phrase "means for injecting under pressure". The claim limitation "means for injecting under pressure" is being treated under 35 U.S.C. 112, sixth paragraph. Applicant discloses the "means for injecting under pressure" is a sprue (see Specification Page 7 line 1-5). Thus, Applicant has properly invoked 35 U.S.C. 112, sixth paragraph.
- Regarding **Claim 13**, Marple teaches a means for purging (see Fig. 1a at 40).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman as applied to claims 1, 3-7, 9-11, and 14-18 above.

- Regarding **Claim 8**, Goodman also teaches that deflocculants control the rhelogical and casting properties of the slip (see column 1 line 27-29). It would have been obvious to one of ordinary skill in the art at the time of the invention without undue experimentation to optimize the deflocculant wt% in the slip to obtain the desired rheological and casting properties. "Discovery of optimum value of result effective variable in known process is ordinarily within skill of art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).
- Regarding **Claim 19**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29). "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

9. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman as evidenced by Applicant's Specification (see Page 3 line 22-24) as applied to claims 2-7, 9-11, and 14-18 above.

- Regarding **Claim 8**, Goodman also teaches that deflocculants control the rhelogical and casting properties of the slip (see column 1 line 27-29). It would have been obvious to one of ordinary skill in the art at the time of the invention without undue experimentation to optimize the deflocculant wt% in the slip to obtain the desired rheological and casting properties. "Discovery of optimum value of result effective variable in known process is ordinarily within skill of art." *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).
- Regarding **Claim 19**, Goodman teaches the process of slip casting to form ceramic articles such as tableware made of china (see column 1 line 18-29). "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

***Response to Arguments***

10. Applicant's arguments filed November 10, 2008 have been fully considered but they are not persuasive.

- With regard to claims 1, 3-7, 9-11 and 14-18, Applicant argues that Goodman does not disclose casting a slip under pressure. This argument has been considered but is not persuasive. Goodman teaches "pressure casting" to be well known and further that "[a]pplying a pressure to the slip increases the casting rate in proportion to the applied pressure." (col. 2, lines 11-13). Thus, Goodman clearly discloses "casting a slip under pressure" as recited in independent claim 1.
- Applicant further argues that the claimed invention differs from Goodman by pressurizing a solution, containing deflocculant, which is passed through the slip deposit, such that the solution is filtered by passage through the deposit. This argument is not persuasive for two reasons. First, this argument does not appear to be commensurate in scope with what has been claimed; the instant claims do not require pressurizing a solution containing a deflocculant. Second, Goodman discloses pressure casting (col. 2, lines 11-15) a solution into a mold which forms a deposit ("a skin or cast of clay body", col. 1, lines 39-41) on the mold which increases in thickness as the solution is filtered through the deposit. At any given point in time after the capillary action of the mold begins drawing the deflocculent-containing solution, a deposit is formed on the mold. It is this deposit through which the deflocculant-containing solution is filtered. Once a desired deposit thickness is attained, the filtration is stopped and the remaining slip is drained off (col. 1, lines

41-44). Thus, the slip is pressure cast into a mold to form a deposit, and a deflocculant-containing solution is filtered through the deposit, meeting both elements of independent claim 1.

- Applicant further argues "...that Goodman is silent as to a separate solution, which may be added to the slip, already cast into a deposit. The claimed invention, however, involves a suspension, or slip, and a separate solution, which is brought into the mold once the slip has already been cast into a deposit." (emphasis in Applicant's response). This argument is also not commensurate in scope with what has been claimed. The instant claims do not require a *separate* solution, nor do they require this solution *to be brought into the mold once the slip has already been cast* into a deposit. There is nothing in the language of the instant claims which would preclude the deflocculant-containing solution from also including the deposit-forming slip. Applicant has failed to distinguish the language of the claims over the teachings of the prior art.
- Applicant further argues that the instantly claimed invention does not include the step of modifying the slip suspension prior to casting using specific ions, as disclosed by Goodman. This argument has been considered but is not persuasive. There is nothing in the language of the instant claims which would preclude an additional step of modifying the slip suspension prior to casting with ions. Note the "comprising" language, which leaves the method open for additional steps.
- Concerning claims 2-7, 9-11 and 14-18, Applicant argues that Applicant's specification on page 3, lines 22-24 "...discloses that, traditionally, clay mixtures may

be flocculated, though with much difficulty, and that clay mixtures are typically not used with pressurized molding." Applicant's specification makes no such disclosure. Page 3, lines 22-24 of Applicant's specification recites, "In contrast, clay-based slips (such as for earthenware or stoneware) do not flow well, which means that they are difficult to deflocculate..." Thus, Goodman's teaching that the slip contains a clay mixture (col. 1, lines 22-29) meets claim 2, as evidenced by Applicant's specification noting that clay-based slips are flocculated.

- With regard to claim 12, in response to applicant's argument that Marple *et al.* discloses various process limitations, including the use of an open circuit and mixing slips prior to slip casting, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Such is the case here. Applicant argues an "inherent difference" in the workpiece utilized by the device of Marple *et al.* Specifically, Applicant argues how Marple *et al.*'s "suspension" differs from Applicant's "solution." Again, this difference is irrelevant to claim 12, because the tank of Marple *et al.* (20, fig. 1a; page 6, line 15) would be capable of containing either workpiece -- a solution or suspension -- which is all that is required by instant claim 12.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARRY THROWER whose telephone number is 571-270-5517. The examiner can normally be reached on Monday through Friday from 9:30AM-6PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Larry Thrower/
Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791